

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1. (Currently Amended) A tire whose tread comprises at least one first tread element and at least one second tread element, each of the first and second tread elements having a contact surface that, during normal operation of a vehicle wheel equipped with the tire, comes into contact with the ground in a contact area on each revolution of the tire, the first and second tread elements being configured such that, at least under a first rolling condition ~~within a range of rolling conditions to be monitored~~, the contact surface of the at least one first tread element slides relative to the ground during its passage through the contact area, while the at least one second tread element does not slide under the first rolling condition, the at least one first tread element comprising a sensor capable of making a measurement ~~[[producing a signal representative]]~~ of a level of tangential force in the contact surface of the at least one first tread element during its passage through the contact area, wherein an estimate of a tangential force on the vehicle is obtained ~~[[obtainable]]~~ based on the signal produced by ~~[[a single one of]]~~ the at least one first tread ~~[[elements]]~~ element, the sensor in each first tread element producing a signal proportional to the tangential force acting upon that first tread element.

2. (Original) A tire according to claim 1, in which the first tread element is made of a material different from that of which the second tread element is

made and which confers to the first tread element an adherence potential lower than that of the second tread element.

3. (Original) A tire according to claim 1, in which the first tread element is made of a material different from the material of which the second tread element is made and which confers to the first tread element a wear resistance better than that of the second tread element.

4. (Original) A tire according to claim 1, in which the first tread element is made of a material having a Young's modulus higher than the Young's modulus of the material of which the second tread element is made.

5. (Original) A tire according to claim 1, in which the contact surface of the first tread element is located at a distance from the wheel axle that is less than the distance of the contact surface of the second tread element from the wheel axle.

6. (Previously Presented) A tire according to claim 1, in which the tread further comprises means that constitute a sensor within the second tread element which is sensitive at least to a tangential force in the contact surface of the second tread element during its passage through the contact area.

7. (Currently Amended) A tire according to claim 1, in which the first tread element, viewed at the surface of the tread, has a central zone surrounded by an

encircling zone, the sensor being disposed so as to achieve a measurement in the central zone and being sensitive to at least one tangential force exerted at the surface of the central zone,

wherein the central zone has a resistance to a force directed perpendicular to the surface of the tread which is less than a resistance to a force directed perpendicular to the surface of the tread offered by the encircling zone.

8. (Original) A tire according to claim 7, in which the surface area of the central zone is at least substantially equivalent to the surface area of the encircling zone.

9. (Original) A tire according to claim 7, in which,  $L_r$  being the length of the first tread element in the preferred rolling direction,  $L_g$  being the length of the first tread element in the direction perpendicular to the preferred rolling direction,  $L_1$  being the length of the central zone in the preferred rolling direction,  $L_2$  being the length of the central zone in the direction perpendicular to the preferred rolling direction,  $d_r$  being the minimum length measurable on the encircling zone in the preferred rolling direction,  $d_g$  being the minimum length measurable on the encircling zone in the direction perpendicular to the preferred rolling direction, the following relations are obeyed:  $d_r > L_r/10$ ,  $d_g > L_g/10$ ,  $L_r/5 < L_1 < 4L_r/5$  and  $L_g/5 < L_2 < 4L_g/5$ .

10. (Original) A tire according to claim 7, in which the center of mass of the first tread element is in the central zone.

11. (Cancelled).
12. (Original) A tire according to claim 7, in which a thin recess strip relieves of stress the material situated radially beneath the surface of the central zone as compared with the adjacent material situated beneath the encircling zone.
13. (Original) A tire according to claim 7, in which a plurality of cutouts in the shape of wells are molded into the central zone.
14. (Original) A tire according to claim 13, in which the cutouts are at least partially inclined.
15. (Original) A tire according to claim 7, in which the Young's modulus of the material situated beneath the central zone is smaller than the Young's modulus of the adjacent material situated beneath the encircling zone.
16. (Original) A tire according to claim 12, in which the thickness of the thin strip is approximately 0.3 mm to 2 mm.
17. (Previously Presented) A tire according to claim 12, in which the thin strip is at least partially inclined.

18. (Original) A tire according to claim 1, in which the tread includes sufficient first tread elements to ensure that there is always at least one first tread element in the contact zone with the ground during each revolution of the tire.

19. (Previously Presented) A tire according to claim 1, in which the means that constitute a sensor is embedded in the first tread element.

20. (Original) A tire according to claim 19, in which the sensor is arranged radially inside of the tread intended to become worn during the use of the tire.

21. (Original) A tire according to claim 1, in which the sensor comprises a device or devices with Hall effect.

22-29. (Cancelled)

30. (Currently Amended) A tire according to claim 1, wherein the tire comprises [[further comprising]] more than one first tread element [[elements]] and [[wherein]] all of the first tread elements are substantially the same elements.

31. (Currently Amended) A tire whose tread comprises at least one first tread element and at least one second tread element each of the first and second tread elements having a contact surface that, during normal operation of a vehicle wheel equipped with the tire, comes into contact with the ground in a contact area on each

revolution of the tire, the first and second tread elements being configured such that, at least under a first rolling condition ~~within a range of rolling conditions to be monitored~~, the contact surface of the at least one first tread element slides relative to the ground during its passage through the contact area, while the at least one second tread element slides, under the first rolling condition, insufficiently to allow measurement of tangential force, the at least one first tread element comprising a sensor capable of making a measurement [[producing a signal representative]] of a level of tangential force in the contact surface of the at least one first tread element during its passage through the contact area, wherein an estimate of a tangential force on the vehicle is obtained [[obtainable]] based on the signal produced by [[a single one of]] the at least one first tread [[elements]] element, the sensor in each first tread element producing a signal proportional to the tangential force acting upon that first tread element.

32. (Currently Amended) A tire whose tread comprises a plurality of first tread elements and a plurality of second tread elements, each of the first and second tread elements having a contact surface that, during normal operation of a vehicle wheel equipped with the tire, comes into contact with the ground in a contact area on each revolution of the tire, the first and second tread elements being configured such that, at least under a first rolling condition ~~within a range of rolling conditions to be monitored~~, the contact surfaces of the first tread elements slide relative to the ground during passage through the contact area, whereas the contact surfaces of the second tread elements do not slide under the first rolling condition, the first tread elements each comprising a sensor capable of measuring tangential force in the contact surface of the respective first tread

element during passage through the contact area, wherein an estimate of a tangential force on the vehicle is obtained ~~can be obtained~~ from the tangential force measured in each of the first tread elements, wherein all the first tread elements are substantially the same elements, and the sensor in each of the first tread elements produces a signal proportional to the tangential force acting upon the respective first tread element.

33. (New) A tire according to claim 1, wherein the tire comprises more than one first tread element and a plurality of estimates of tangential force are determined, each estimate corresponding to a signal from one of the first tread elements.